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APPLICATION NO.	FILING DATE	FIRST NAMED INVENTOR	ATTORNEY DOCKET NO.	CONFIRMATION NO.
10/815,155	03/30/2004	Feng-Jung Huang	55123P308	8193

8791 7590 05/18/2005

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EXAMINER	
TON, MY TRANG	

ART UNIT	PAPER NUMBER
2816	

DATE MAILED: 05/18/2005

Please find below and/or attached an Office communication concerning this application or proceeding.

SM

Office Action Summary	Application No.	Applicant(s)	
	10/815,155	HUANG ET AL.	
	Examiner	Art Unit	
	My-Trang N. Ton	2816	

-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --

Period for Reply

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE 3 MONTH(S) FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If the period for reply specified above is less than thirty (30) days, a reply within the statutory minimum of thirty (30) days will be considered timely.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133). Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

Status

1)☒ Responsive to communication(s) filed on *04 May 2005*.

2a)☐ This action is **FINAL**. 2b)☒ This action is non-final.

3)☐ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

Disposition of Claims

4)☒ Claim(s) *17,19 and 20* is/are pending in the application.

4a) Of the above claim(s) _____ is/are withdrawn from consideration.

5)☐ Claim(s) _____ is/are allowed.

6)☒ Claim(s) *17,19 and 20* is/are rejected.

7)☐ Claim(s) _____ is/are objected to.

8)☐ Claim(s) _____ are subject to restriction and/or election requirement.

Application Papers

9)☐ The specification is objected to by the Examiner.

10)☒ The drawing(s) filed on *30 March 2004* is/are: a)☒ accepted or b)☐ objected to by the Examiner.

Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).

Replacement drawing sheet(s) including the correction is required if the drawing(s) is objected to. See 37 CFR 1.121(d).

11)☐ The oath or declaration is objected to by the Examiner. Note the attached Office Action or form PTO-152.

Priority under 35 U.S.C. § 119

12)☐ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).

a)☐ All b)☐ Some * c)☐ None of:

1.☐ Certified copies of the priority documents have been received.

2.☐ Certified copies of the priority documents have been received in Application No. _____.

3.☐ Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).

* See the attached detailed Office action for a list of the certified copies not received.

MY-TRANG NU TON
PRIMARY EXAMINER

Attachment(s)

1) ☒ Notice of References Cited (PTO-892)
2) ☐ Notice of Draftsperson's Patent Drawing Review (PTO-948)
3) ☐ Information Disclosure Statement(s) (PTO-1449 or PTO/SB/08) Paper No(s)/Mail Date _____.
4) ☐ Interview Summary (PTO-413) Paper No(s)/Mail Date. _____.
5) ☐ Notice of Informal Patent Application (PTO-152)
6) ☐ Other: _____.

Election/Restrictions

Applicant's election without traverse of Species 12, Fig. 8a, drawn to claims 17, 19-20 in the reply filed on 05/04/05 is acknowledged.

Noted that: Claim 17 only being generic to species 11, Fig. 7a.

Claim Rejections - 35 USC § 112

Claims 19-20 are rejected under 35 U.S.C. 112, second paragraph, as being indefinite for failing to particularly point out and distinctly claim the subject matter which applicant regards as the invention.

Claim 19 recites the limitation "the reference voltage" in lines 1-2. There is insufficient antecedent basis for this limitation in the claim.

Claim 20 recites the limitation "the DC source-to-drain voltage of the FET is substantially zero". There is insufficient antecedent basis for this limitation in the claim.

Claim Rejections - 35 USC § 103

The following is a quotation of 35 U.S.C. 103(a) which forms the basis for all obviousness rejections set forth in this Office action:

> (a) A patent may not be obtained though the invention is not identically disclosed or described as set forth in section 102 of this title, if the differences between the subject matter sought to be patented and the prior art are such that the subject matter as a whole would have been obvious at the time the invention was made to a person having ordinary skill in the art to which said subject matter pertains. Patentability shall not be negatived by the manner in which the invention was made.

Claims 17, 19-20 are rejected under 35 U.S.C. 103(a) as being unpatentable over Nakatani et al (U. S Patent No. 6,870,241).

Nakatani et al disclose in fig. 8 a high frequency switch circuit including:

a field effect transistor (201) having a body (BG), a source (source), a drain (drain) and a gate (G), with parasitic capacitances between the gate and source, the gate and drain, the source and body and the drain and body frequencies (the limitation "parasitic capacitances" is inherent seen between gate and source, gate and drain, source and body, and drain and body of transistor 201), the capacitances having respective impedances at the AC signal.

the body (BG) of the FET (201) being coupled to a circuit reference (Ground) through a resistance (209);

the gate (G) of the FET (201) being coupled to a respective control voltage (Vc) through a respective resistance (205);

the FET (201) being biased to operate in its linear region (transistor 201 is a resistor when it's turned on, thus operates in a linear region) as recited in claim 17.

However, this reference does not specifically disclose "a resistance having an impedance higher than the impedance of the parasitic capacitances to the body" or "a respective resistance having an impedance higher than the impedance of the gate" as recited in claim 17, lines 9-10 and 12-13.

Although Nakatani et al do not expressly state the impedance value, this difference is not of patentable merit because it is notoriously well known in the art that different values for the impedance can be selected in order to produce correspondingly different output values.

Thus, it would have been obvious to one of ordinary skill in the art at the time the invention was made to utilize the resistance (208) having an impedance higher than the impedance of the parasitic capacitances (inherent seen) to the body (BG) (it is well known in the art that parasitic capacitances have very small impedance value) in realizing the circuit of the Nakatani reference for the purpose of producing different output values when different values of the impedance is selected.

The same motivation applied to "a resistance having an impedance higher than the impedance of the parasitic capacitances to the body" is applied to or "a respective resistance having an impedance higher than the impedance of the gate".

Regarding claim 19: the reference voltage is a circuit ground (Ground).

Regarding claim 20: due to backgate of transistor 201 operates in a high impedance state, it will block DC current, thus, the limitation "the DC source-to-drain voltage of the FET is substantially zero" is met.

Any inquiry concerning this communication or earlier communications from the examiner should be directed to My-Trang N. Ton whose telephone number is 571-272-1754. The examiner can normally be reached on 7:00 a.m - 5:30 p.m.

If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, Timothy Callahan can be reached on 571-272-1740. The fax phone number for the organization where this application or proceeding is assigned is 703-872-9306.

Information regarding the status of an application may be obtained from the Patent Application Information Retrieval (PAIR) system. Status information for published applications may be obtained from either Private PAIR or Public PAIR. Status information for unpublished applications is available through Private PAIR only. For more information about the PAIR system, see http://pair-direct.uspto.gov. Should you have questions on access to the Private PAIR system, contact the Electronic Business Center (EBC) at 866-217-9197 (toll-free).

My-Trang N. Ton
Primary Examiner
Art Unit 2816

May 16, 2005